

Appl. No. 10/666,493
Reply to Final Office Action of February 13, 2006

REMARKS

Reconsideration of this application is respectfully requested.

Claim rejections under 35 U.S.C. §112

The Action rejects Claims 1, 3-9 and 11-15 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

The Action states that the specification does not describe forming a gate dielectric layer overlying the dielectric layer. Applicants submit that this feature is supported by the specification. The dielectric layer 108 and the photoresist layer 112 are formed as shown in FIG. 8. The photoresist layer 112 is then stripped away, Page 14, Lines 16-17. The floating gate dielectric 120 may be formed overlying the substrate 104 by thermal oxidation or by a "CVD (Chemical Vapor Deposition)" process, Page 14, Lines 18-21. It is well known to one of ordinary skill in the art that a floating gate dielectric layer 120 formed by a "CVD" process covers the substrate 104. The floating gate dielectric layer 120 thus overlies not only the area 116 where the floating gate is to be formed, but also the dielectric layer 108. Accordingly, the specification supports this feature recited in the claims in sufficient detail to allow one of ordinary skill in the art to possess the claimed invention.

Notwithstanding the foregoing, Claim 1 has been amended to recite "forming a floating gate dielectric layer overlying said area where said floating gate is to be formed" in order to better recite the claimed invention.

The Action also states that the specification does not describe wherein the gate dielectric layer overlying the dielectric layer serve as a gate layer. Claim 1 has been amended to clarify the recited step in that "remaining portion of the dielectric layer serves as a control gate dielectric layer." Support for this feature can be found at, for example, the top paragraph of page 15.

Finally, the Action states that the specification does not describe the dielectric layer overlying the area where the floating gate is to be formed serves as a tunneling layer. Consistent with the amendments described above, Claim 1 has been amended to recite that "the floating gate

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dielectric layer overlying the area where the floating gate is to be formed serves as a tunneling layer." Support for this feature can be found at, for example, the top paragraph of page 15.

Claim 9 has been amended in the manner discussed above for Claim 1.

It is submitted that the foregoing amendments address each § 112 rejection set forth in the Action. Reconsideration and withdrawal of the § 112 rejections are respectfully requested.

Other Amendments

Claims 4, 7, 12 and 14 have been amended in consistent with the amendments made in Claims 1 and 9.

Other Remarks

In the previous action, the Examiner rejected the claims under 35 U.S.C. §§102 and 103 over Tuan and Chuang. As discussed in the response to the previous action, Tuan forms a gate dielectric layer 140 in FIG. 8. No other dielectric layer in Tuan is provided to serve as a control gate dielectric layer. Though Tuan forms the field oxide 134, the field oxide 134, which is an isolation structure separating active areas, clearly does not serve as a control gate dielectric layer. Neither the drawings nor specification of Tuan show a structure having a control gate dielectric layer and a floating gate dielectric layer. Thus, Tuan fails to disclose or suggest that "a remaining portion of said dielectric layer serves as a control gate dielectric layer."

The previous action acknowledged that Tuan does not disclose the feature recited in the previously cancelled Claim 2, which were added to Claim 1 in the previous response. In the previous action, the Examiner relied on Chuang for providing the features of Claim 2. Specifically, the Examiner alleged that Chuang's dielectric layer 202 is the dielectric layer cited in Claim 1. However, Chuang clearly describes that the dielectric layer 202 is a pad oxide layer, Col. 3, Lines 30-31. Chuang's dielectric layer 202 is then removed, Col. 4, Lines 21-25, and FIG. 2f. Clearly, the dielectric layer 202, once removed, cannot serve as a control gate dielectric layer. Chuang, therefore, fails to disclose or suggest achieving the features of canceled Claim 2, which were previously amended into Claim 1.

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In addition, Claim 1 has been amended to clarify that the conductive spacers are formed "over a portion of said dielectric layer." This feature is clearly shown in FIGS. 10-12 of the present application. Consistent with foregoing discussion, neither Tuan nor Chuang discloses this recited feature.

Therefore, for at least the reasons set forth above, it is submitted that Claim 1 is patentable over the art of record.

Claims 3-8 depend from Claim 1 and, therefore, are also allowable for at least the same reasons set forth above.

Claim 9 has been amended in the manner discussed above for Claim 1. It is submitted, therefore, that Claim 9 and Claims 11-15, which depend from Claim 9, are allowable for at least the same reasons set forth above for Claim 1.

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Conclusion

In view of the foregoing amendments and remarks, Applicant submits that this application is in condition for allowance. Early notification to that effect is respectfully requested.

The Commissioner for Patents is hereby authorized to charge any additional fees or credit any excess payment that may be associated with this communication to deposit account 04-1679.

Respectfully submitted,

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